Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Missile Defense Agency

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4:

PE 0604672C I Homeland Defense Radar-Hawaii

Date: March 2019

Advanced Component Development & Prototypes (ACD&P)

| , lavamosa somponom Bovolopini | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | <i>)</i> | | | | | | | | | |
|--|----------------|---|----------|-----------------|----------------|------------------|---------|---------|---------|---------|---------------------|---------------|
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| Total Program Element | - | 0.000 | 62.221 | 274.714 | - | 274.714 | 210.614 | 135.627 | 87.773 | 40.772 | 0.000 | 811.721 |
| MD41: Homeland Defense Radar - Hawaii (HDR-H) | - | 0.000 | 62.221 | 267.901 | - | 267.901 | 197.867 | 125.382 | 80.789 | 36.330 | 0.000 | 770.490 |
| MD40: Program-Wide Support | - | 0.000 | 0.000 | 6.813 | - | 6.813 | 12.747 | 10.245 | 6.984 | 4.442 | 0.000 | 41.231 |

Program MDAP/MAIS Code: 362

Note

Homeland Defense Radar - Hawaii (HDR-H) funding was appropriated/budgeted as follows:

FY 2017: PE 0603884C BMDS Sensors, Project MD41

FY 2018: PE 0604673C Pacific Discriminating Radar, Project MD41

FY 2019: PE 0604672C Homeland Defense Radar Hawaii, Project MD41

Increase from FY 2019 to FY 2020 provides purchase of radar equipment.

A. Mission Description and Budget Item Justification

The HDR-H Program Element (PE) 0604672C is comprised of a persistent discrimination sensor for the Ballistic Missile Defense System (BMDS). HDR-H addresses United States Northern Command (NORTHCOM) and United States Indo-Pacific Command (INDOPACOM) operational requirements for a near term persistent solution against advancing threats and closes capability gaps. HDR-H provides 24 hours a day, 7 days a week, and 365 days a year tracking and discrimination capability against increasingly complex threats, improve capability of Ballistic Missile Defense (BMD) interceptors, and supports multi-mission areas (e.g., Space Situational Awareness and Intelligence Collection). The radars will leverage development efforts from other sensor projects to enhance discrimination, tracking, and hit assessment to maximize interceptor usage. The HDR-H final testing, integration and delivery is planned for FY 2023.

PE 0604672C: Homeland Defense Radar-Hawaii Missile Defense Agency UNCLASSIFIED
Page 1 of 14

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Missile Defense Agency

Appropriation/Budget Activity

0400: Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 Program Element (Number/Name)

PE 0604672C I Homeland Defense Radar-Hawaii

Date: March 2019

| B. Program Change Summary (\$ in Millions) | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
|--|---------|---------|--------------|-------------|---------------|
| Previous President's Budget | 0.000 | 0.000 | 0.000 | - | 0.000 |
| Current President's Budget | 0.000 | 62.221 | 274.714 | - | 274.714 |
| Total Adjustments | 0.000 | 62.221 | 274.714 | - | 274.714 |
| Congressional General Reductions | 0.000 | 0.000 | | | |
| Congressional Directed Reductions | 0.000 | 0.000 | | | |
| Congressional Rescissions | 0.000 | 0.000 | | | |
| Congressional Adds | 0.000 | 0.000 | | | |
| Congressional Directed Transfers | 0.000 | 62.221 | | | |
| Reprogrammings | 0.000 | 0.000 | | | |
| SBIR/STTR Transfer | 0.000 | 0.000 | | | |
| Missile Defeat and Defense Enhancement | 0.000 | 0.000 | 0.000 | - | 0.000 |
| Other Adjustment | 0.000 | 0.000 | 274.714 | - | 274.714 |
| Other Adjustment | 0.000 | 0.000 | 274.714 | - | 274.714 |

Change Summary Explanation

Increase in FY 2019 and FY 2020 from PB19 to PB20 provides the transfer of HDR-H from Pacific Discriminating Radar (0604673C) to this new Homeland Defense Radar - Hawaii (0604672C) and provides purchase of radar equipment.

PE 0604672C: Homeland Defense Radar-Hawaii Missile Defense Agency UNCLASSIFIED
Page 2 of 14

| Exhibit R-2A, RDT&E Project Ju | stification | : PB 2020 N | lissile Defe | nse Agency | <i>'</i> | | | | | Date: Marc | ch 2019 | |
|--|----------------|-------------|-------------------------|-----------------|---|------------------|---------|---------|---------|------------|---------------------|---------------|
| Appropriation/Budget Activity 0400 / 4 | | _ | am Elemen 72C / Home | | iber/Name) land Defense Radar - Hawaii | | | | | | | |
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost |
| MD41: Homeland Defense Radar - Hawaii (HDR-H) | - | 0.000 | 62.221 | 267.901 | - | 267.901 | 197.867 | 125.382 | 80.789 | 36.330 | 0.000 | 770.490 |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

Note

Homeland Defense Radar - Hawaii (HDR-H) funding was appropriated/budgeted as follows:

FY 2017: PE 0603884C BMDS Sensors, Project MD41

FY 2018: PE 0604673C Pacific Discriminating Radar, Project MD41

FY 2019: PE 0604672C Homeland Defense Radar Hawaii, Project MD41

Increase from FY 2019 to FY 2020 provides purchase of radar equipment.

A. Mission Description and Budget Item Justification

The Homeland Defense Radar-Hawaii (HDR-H) is a persistent discrimination radar that will provide additional capability to the Ballistic Missile Defense System (BMDS) to support the defense of Hawaii. HDR-H's primary mission is to provide autonomous acquisition and persistent precision tracking and discrimination to optimize the defensive capability of the BMDS and counter evolving threats. The HDR-H radar will be integrated into the BMDS through the C2BMC system and will feature a scalable and open system architecture to mitigate evolving threats. HDR-H's inherent capability will support additional mission areas, including but not limited to, Space Situational Awareness (SSA). The HDR-H radar is comprised of an equipment shelter housing a singled-faced array, a Mission Control Facility (MCF) which supports radar operations, a Radar Antenna Base, a Thermal Control System, and supporting facilities and infrastructure. The radar prime contractor will be responsible for building and fielding the radar equipment with associated Radar Antenna Base and Thermal Control, and the HDR-H Equipment Shelter (HES). Siting surveys will be conducted and EIS will be completed to determine the final recommended site. The HDR-H radar is anticipated to be operational in Hawaii in FY 2023.

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each) | FY 2018 | FY 2019 | FY 2020 |
|--|---------|---------|---------|
| Title: Homeland Defense Radar Hawaii (HDRH) | 0.000 | 62.221 | 267.901 |
| Articles: | - | - | - |
| Description: The HDR-H program includes requirements development activities associated with systems engineering, hardware and software development, discrimination improvements, design reviews, testing, and Models and Simulation (M&S) efforts for radar development. Efforts include site activation and preparation of site infrastructure for construction activities. The program will develop and integrate C2BMC systems for HDR-H functionality. The program will develop and deliver radar software Build 1 and establish independent Verification and Validation (IV&V) lab for testing of operational software. The program includes purchase, manufacture, and test of long lead components. Specific and/or unique accomplishments to each FY are as follows: | | | |

PE 0604672C: *Homeland Defense Radar-Hawaii* Missile Defense Agency

| Exhibit R-2A, RDT&E Project Justi | fication: PB | 2020 Missile | e Defense Aç | gency | | | | | Date: Ma | arch 2019 | |
|--|--|--|---|--|---|--|--|-----------|-------------------------------------|------------|-----------------------|
| Appropriation/Budget Activity 0400 / 4 | | | | | 04672C I Ha | nent (Numb omeland Def | er/Name) ense Radar- | | ct (Number/N I Homeland D -H) | | ar - Hawaii |
| B. Accomplishments/Planned Prog | grams (\$ in I | Millions, Art | icle Quantit | ies in Each |) | | | | FY 2018 | FY 2019 | FY 2020 |
| FY 2019 Plans: -Initiate preparations for system-leve -Initiate Environmental Impact staten -Complete System Requirements Re -Complete Integrated Baseline Revie | nents view (SRR) | Design Rev | iew (PDR) | | | | | | | | |
| FY 2020 Plans: -Continue system level PDR in FY 20Initiate long lead procurements of cr Mission Processing Group (MPG) -Initiate Critical Design Review (CDRInitiate production activities for critic R Low Power Module Circuit Card As Digital Receiver/Exciter (DREX) LRU Lead Column Processor CCAs, SubaInitiate production in FY 2020 as rec | itical comporal at the compal component is semblies (Cls, DREX Raparray Suite Aquired for DD | oonent and s ts: Transmit CAs), T/R H dio Frequen ssembly ma 250 in FY 20 | subsystem le Receive (T/l igh Power M cy (RF) CCA terials, and S)23 | evel R) modules, lodule CCAs s, DREX Pro Synthesizer (| Wide Band s, Power Line ocessor CCA Cabinets | Limiter (WBL e Replaceabl As, Column F | LR) modules, le Units (LRU Processors, L | T/ s), | | | |
| Increase from FY 2019 to FY 2020 p | rovides for th | e award of t | he radar prir | | · | | _l uipment. rograms Su l | ntotals | 0.000 | 62.221 | 267.90 |
| C. Other Program Funding Summa | ny (\$ in Milli | one) | | 710001 | | | · og. ao oa. | 7101410 | 0.000 | 02.221 | 201.00 |
| Line Item | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 202 | 23 FY 2024 | Cost To | |
| • 0603884C: Ballistic | 290.289 | 385.375 | 283.487 | - | 283.487 | 296.098 | 263.681 | 276.09 | 351.607 | Continuing | Total Co |
| | 0.000 449.985 | 385.375 174.000 507.817 | 283.487 0.000 564.206 | | · · · · · · · · · · · · · · · · · · · | | | | 0.000 | Continuing | Total Co Continuin |

PE 0604672C: *Homeland Defense Radar-Hawaii* Missile Defense Agency

UNCLASSIFIED
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| Exhibit R-2A, RDT&E Project Just | ification: PB | 2020 Missile | e Defense A | gency | | | | | Date: Ma | rch 2019 | |
|--|------------------|--------------|-------------|---------|---------------------|----------------------------|---------|---------|-------------------------|-----------------------------|-------------------|
| Appropriation/Budget Activity 0400 / 4 | | | | | 04672C <i>I H</i> d | nent (Numb omeland Defe | , | , , | Number/Na omeland Do | i me) efense Rada | ır - Hawaii |
| C. Other Program Funding Summa | ary (\$ in Milli | ons) | | | | | | | | | |
| | | | FY 2020 | FY 2020 | FY 2020 | | | | | Cost To | |
| <u>Line Item</u> | FY 2018 | FY 2019 | Base | 000 | <u>Total</u> | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Complete | Total Cost |
| 0604672C: Homeland Defense | 0.000 | 0.000 | 0.000 | - | 0.000 | 138.000 | 183.000 | 0.000 | 0.000 | 0.000 | 321.000 |
| Radar - Hawaii - MILCON | | | | | | | | | | | |
| 0604672C: Homeland | 0.000 | 62.221 | 274.714 | - | 274.714 | 210.614 | 135.627 | 87.773 | 40.772 | 0.000 | 811.721 |
| Defense Radar-Hawaii | | | | | | | | | | | |
| • 0604673C: <i>Pacific</i> | 59.564 | 15.926 | 6.711 | - | 6.711 | 59.800 | 53.444 | 279.349 | 398.573 | 0.000 | 873.367 |
| Discriminating Radar | | | | | | | | | | | |
| • 0604673C: <i>Pacific</i> | 0.000 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 365.970 | 0.000 | 365.970 |
| Discriminating Radar - MILCON | | | | | | | | | | | |
| • 0604873C: Long Range | 370.516 | 166.543 | 136.423 | - | 136.423 | 122.877 | 99.920 | 88.203 | 64.569 | Continuing | Continuing |
| Discrimination Radar (LRDR) | | | | | | | | | | | |

Remarks

D. Acquisition Strategy

The HDR-H acquisition strategy was approved in December 2017 for a single radar. In May of 2018 a change was approved to the acquisition strategy to a multiple-award IDIQ contract for up to three radars. The HDR-H procurement will be the first delivery order of the competitively awarded IDIQ contract and HDR-H is a full/open competitive award. An additional two radar delivery orders will be awarded competitively. MDA awarded the HDR-H in December 2018. The prime contractor will manage, develop, build and integrate, test, and field the radar. The prime contract includes other fixed price and cost-reimbursable line items (to include the antenna base and radar thermal control and options in order to properly balance acquisition costs and risks. Performance and cost incentives were included to motivate contractor performance. The radar prime contractor will deliver a full technical data package, which will enable the government to effectively and affordably sustain the system. The HDR-H is expected to complete DD250 and initial fielding in 2023.

E. Performance Metrics

N/A

PE 0604672C: Homeland Defense Radar-Hawaii Missile Defense Agency

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency Date: March 2019 Appropriation/Budget Activity R-1 Program Element (Number/Name) Project (Number/Name) 0400 / 4 PE 0604672C I Homeland Defense Radar-MD41 I Homeland Defense Radar - Hawaii (HDR-H) Hawaii

| Product Developmen | nt (\$ in Mi | illions) | | FY 2 | 2018 | FY 2 | 2019 | | 2020 ase | | 2020 CO | FY 2020 Total | | | |
|---|------------------------------|-----------------------------------|----------------|-------|---------------|--------|---------------|---------|---------------|------|---------------|------------------|------------|---------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To | Total Cost | Target Value of Contract |
| Homeland Defense Radar – Hawaii (HDR– H) - Homeland Defense Radar - Hawaii (HDR- H) - Communications Integration | SS/CPIF | Lockheed Martin : AL | 0.000 | 0.000 | | 16.100 | Mar 2019 | 12.800 | Mar 2020 | - | | 12.800 | Continuing | g Continuing |) Continuing |
| Homeland Defense Radar – Hawaii (HDR-H) - Homeland Defense Radar - Hawaii (HDR-H) - IV&V | MIPR | TBD : TBD | 0.000 | 0.000 | | 3.145 | Feb 2019 | 3.497 | Dec 2019 | - | | 3.497 | Continuing | Continuing | Continuing |
| Homeland Defense Radar – Hawaii (HDR–H) - Homeland Defense Radar - Hawaii (HDR-H) - Prime Contractor | C/FPIF | Lockheed Martin : AL | 0.000 | 0.000 | | 36.198 | Dec 2018 | 241.656 | Dec 2019 | - | | 241.656 | Continuing | Continuing | Continuing |
| Homeland Defense Radar – Hawaii (HDR–H) - Homeland Defense Radar - Hawaii (HDR-H) - Site Activation & Studies | C/TBD | TBD : TBD | 0.000 | 0.000 | | 2.390 | Mar 2019 | 3.990 | Mar 2020 | - | | 3.990 | Continuing | Continuing | Continuing |
| Homeland Defense Radar – Hawaii (HDR– H) - Homeland Defense Radar - Hawaii (HDR-H) — Civilians/Travel | Allot | MDA : Various | 0.000 | 0.000 | | 1.000 | Nov 2018 | 2.570 | Oct 2019 | - | | 2.570 | Continuing | Continuing | Continuing |
| Homeland Defense Radar – Hawaii (HDR– H) - Homeland Defense Radar – Hawaii (HDR– H)-Contractor Support Services | Various | Various : Various | 0.000 | 0.000 | | 3.388 | Nov 2018 | 3.388 | Oct 2019 | - | | 3.388 | Continuing | g Continuing | Continuing |
| | | Subtotal | 0.000 | 0.000 | | 62.221 | | 267.901 | | - | | 267.901 | Continuing | Continuing | N/A |

Remarks N/A

Missile Defense Agency

PE 0604672C: Homeland Defense Radar-Hawaii

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Appropriation/Budget Activity

0400 / 4

R-1 Program Element (Number/Name)
PE 0604672C I Homeland Defense Radar-Hawaii

Project (Number/Name)

MD41 / Homeland Defense Radar - Hawaii

Date: March 2019

(HDR-H)

| Support (\$ in Million | s) | | | FY | 2018 | FY | 2019 | FY 2 | 2020 ise | FY 2 | 2020 CO | FY 2020 Total | | | |
|------------------------|------------------------------|-----------------------------------|----------------|------|---------------|------|---------------|------|---------------|------|---------------|------------------|---------------------|---------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| | | Subtotal | - | - | | - | | - | | - | | - | - | - | N/A |

Remarks

N/A

| | | | | | | , | | | | | | Target |
|-----------------|-----------|---------|--------|------|---------|------|---|------|---------|------------|------------|----------|
| | Prior | | | | | 2020 | | 2020 | FY 2020 | Cost To | Total | Value of |
| | Years | FY 2018 | FY 2 | 2019 | Ba | ase | 0 | СО | Total | Complete | Cost | Contract |
| Project Cost To | als 0.000 | 0.000 | 62.221 | | 267.901 | | - | | 267.901 | Continuing | Continuing | N/A |

Remarks

Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.

| Exhibit R-4, RDT&E Schedule | Profile: PB 2020 Missile Defen | se Agency | | | | | | | | | | | | | | | Da | ıte: | Ma | arch | 201 | 19 | |
|--|--|--|--------------------------------|---------|-----------|-----------|------|------------------|----------|-----------|-----------|-----------|------------|-------|-------------|-----|------------|-----------|-----------|-----------|------------|---------|------------|
| Appropriation/Budget Activity 0400 / 4 | | I | Prog i 06046 vaii | | | | • | | | | | • | - | | 41 <i>I</i> | ÌΗ | lum ome | | | | | Rada | ar - Hawai |
| Significant Event Complete ▲ Significant Event Planned △ | Milestone Decision Complete ★ Milestone Decision Planned ☆ | Element Test Com Element Test Planr | | | | | | stem stem | | | | | lete ed | • | | | | | | | y ♦ | | |
| | | | F' | Y 201 | 8 | F | Y 20 | 119 | | FY: | 2020 |) | F١ | 202 | 21 | | FY: | 2022 | 2 | F | Y 20 | 23 | FY 2024 |
| Homeland Defense Radar - Hawaii (HD | R-H) | | | | \$ | \$ | ♦ | > \$ | \ | \$ | \$ | ♦ | < | > 💠 | > | · 💠 | ♦ | ♦ | \$ | ♦ | ♦ | > 💠 | |
| System Requirements Review (SRR) | | | | | | | < | > | | | | | | | | | | | | | | | |
| Preliminary Design Review (PDR) | | | | | | | | | | | \$ | | | | | | | | | | | | |
| Developmental Baseline Review (DBR) | | | | | | | | | | | | \$ | | | | | | | | | | | |
| Critical Design Review (CDR) | | | | | | | | | | | | | | | | | | | | | | | |
| MILCON | | | | | | | | | | | | | ♦ ₹ | > < | > < | - 💠 | · < | \$ | | \$ | | | |
| DD-250 | | | | | | | | | | | | | | | | | | | | | < | > | |
| Initial fielding | | | | | | | | | | | | | | | | | | | | | | | |

| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency | | | Date: March 2019 |
|--|---|-------|--|
| Appropriation/Budget Activity 0400 / 4 | , | - 3 (| umber/Name) meland Defense Radar - Hawaii |

Schedule Details

| | S | End | | |
|---|---------|------|---------|------|
| Events | Quarter | Year | Quarter | Year |
| Homeland Defense Radar - Hawaii (HDR-H) | 3 | 2018 | 4 | 2023 |
| System Requirements Review (SRR) | 3 | 2019 | 3 | 2019 |
| Preliminary Design Review (PDR) | 3 | 2020 | 3 | 2020 |
| Developmental Baseline Review (DBR) | 4 | 2020 | 4 | 2020 |
| Critical Design Review (CDR) | 1 | 2021 | 1 | 2021 |
| MILCON | 1 | 2021 | 1 | 2023 |
| DD-250 | 3 | 2023 | 3 | 2023 |
| Initial fielding | 4 | 2023 | 4 | 2023 |

| Exhibit R-2A, RDT&E Project Justification: PB 2020 Missile Defense Agency | | | | | | | | | | | Date: March 2019 | | |
|---|----------------|---------|---------|-----------------|----------------|------------------|---------|---------|---------|------------------------------------|---------------------|---------------|--|
| Appropriation/Budget Activity 0400 / 4 | | | | | , , , , | | | | | lumber/Name) ogram-Wide Support | | | |
| COST (\$ in Millions) | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total | FY 2021 | FY 2022 | FY 2023 | FY 2024 | Cost To Complete | Total Cost | |
| MD40: Program-Wide Support | - | 0.000 | 0.000 | 6.813 | - | 6.813 | 12.747 | 10.245 | 6.984 | 4.442 | 0.000 | 41.231 | |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | | |

Note

Beginning in FY 20 Program Wide Support (PWS) is allocated to the Homeland Defense Radar-Hawaii PE. PWS is allocated on a pro-rata basis across multiple Agency PE's each fiscal year based on the total Agency budget, and therefore fluctuates per PE by fiscal year.

A. Mission Description and Budget Item Justification

PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians and Contract Support Services. This provides integrity and oversight of the BMDS and supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes personnel to support global deployments performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs include: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; Facilities Sustainment, Restoration and Modernization (SRM) program, (formerly Real Property Maintenance) to keep the Department's inventory of facilities in good working order; and similar operating expenses. PWS is allocated on a pro-rata basis across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year.

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each) | FY 2018 | FY 2019 | FY 2020 |
|--|---------|---------|---------|
| Title: Program Wide Support | 0.000 | 0.000 | 6.813 |
| Articles: | - | - | - |
| Description: PWS contains non-headquarters management costs in support of MDA functions and activities across the entire BMDS. It Includes Government Civilians and Contract Support Services. This provides integrity and oversight of the BMDS and supports MDA in the development and evaluation of technologies that will respond to the changing threat. Additionally, PWS includes personnel to support global deployments performing deployment site preparation and activation, and provides facility capabilities for MDA Executing Agent locations. Other MDA wide costs include: physical and technical security; civilian drug testing; audit readiness; the Science, Technology, Engineering, and Mathematics (STEM) program; legal services and settlements; travel and agency training; office, equipment, vehicle, and warehouse leases; utilities and base operations; data and unified communications support; supplies and maintenance; materiel and readiness and central property management of equipment; Facilities Sustainment, Restoration and Modernization (SRM) program, (formerly Real Property Maintenance) to keep the Department's inventory of facilities in good working order; and similar operating expenses. PWS is allocated on a pro-rata basis across most Agency PEs and therefore fluctuates per PE by fiscal year based on the total Agency budget in that fiscal year. | | | |

PE 0604672C: *Homeland Defense Radar-Hawaii* Missile Defense Agency

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 M | Date: N | Date: March 2019 | | | | | |
|---|--|------------------|---|---------|--|--|--|
| Appropriation/Budget Activity 0400 / 4 | R-1 Program Element (Number/Name) PE 0604672C I Homeland Defense Radar-Hawaii | | oject (Number/Name) D40 <i>I Program-Wide Support</i> | | | | |
| B. Accomplishments/Planned Programs (\$ in Millions | F | Y 2018 | FY 2019 | FY 2020 | | | |
| FY 2019 Plans: - SEE ABOVE. | | | | | | | |
| FY 2020 Plans: - SEE ABOVE. | | | | | | | |
| FY 2019 to FY 2020 Increase/Decrease Statement: Increase from FY 2019 to FY 2020 reflects the PWS alloc based on the total Agency budget, and therefore fluctuate | ation on a pro-rata basis across multiple Agency PE's each fiscal yes per PE by fiscal year. | ear | | | | | |

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

PE 0604672C: *Homeland Defense Radar-Hawaii* Missile Defense Agency

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Accomplishments/Planned Programs Subtotals

0.000

0.000

6.813

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Missile Defense Agency

R-1 Program Element (Number/Name)

Project (Number/Name)

Date: March 2019

Appropriation/Budget Activity 0400 / 4

PE 0604672C I Homeland Defense Radar-Hawaii MD40 / Program-Wide Support

nawaii

| Support (\$ in Millions | s) | | | FY 2 | 2018 | FY 2 | 2019 | FY 2 Ba | 2020 ise | FY 2 | 2020 CO | FY 2020 Total | | | |
|---|------------------------------|------------------------------------|----------------|-------|---------------|-------|---------------|------------|---------------|------|---------------|------------------|------------|---------------|--------------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To | Total Cost | Target Value of Contract |
| Program Wide Support - Agency Operations and Support Services | C/CPFF | Various : Multi: AL, CA, CO, VA | 0.000 | 0.000 | | 0.000 | | 6.813 | Dec 2019 | - | | 6.813 | Continuing | Continuing | Continuing |
| | | Subtotal | 0.000 | 0.000 | | 0.000 | | 6.813 | | - | | 6.813 | Continuing | Continuing | N/A |

Remarks

N/A

| | | | | | | | | | | | | Target |
|---------------------|-------|-------|------|-------|------|---------|----|------|---------|------------|------------|----------|
| | Prior | | | | | FY 2020 | FY | 2020 | FY 2020 | Cost To | Total | Value of |
| | Years | FY 2 | 2018 | FY 2 | 2019 | Base | 0 | CO | Total | Complete | Cost | Contract |
| Project Cost Totals | 0.000 | 0.000 | | 0.000 | | 6.813 | - | | 6.813 | Continuing | Continuing | N/A |

Remarks

Award Date reflects date of first obligation. Additional obligations may incrementally occur throughout the year.

PE 0604672C: *Homeland Defense Radar-Hawaii* Missile Defense Agency

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| Exhibit R-4, RDT&E Schedu | se Agency | | | | | | | Date: M | arch 2019 | | |
|--|--|----------------|---------|--------------------|---|---------|---------------------------------------|---------|-----------------------------|----------|--------------------|
| Appropriation/Budget Activity 0400 / 4 | | | | | | | nber/Name) Defense Radar- | | ct (Number/N I Program-W | | |
| Significant Event Complete ▲ Significant Event Planned △ | Milestone Decision Complete ★ Milestone Decision Planned ☆ | Element Test I | ⊃lanned | \rightarrow | | System | Level Test Compl Level Test Planne | d O | Complete A | tivity 💠 | |
| MD40 Program Wide Support | | | | FY 2018 | 3 | FY 2019 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 ♦ ♦ ♦ • |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
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| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Missile Defense Agency | | | Date: March 2019 |
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Schedule Details

| | St | art | End | | |
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| Events | Quarter Year | | Quarter | Year | |
| MD40 Program Wide Support | 1 | 2020 | 4 | 2024 | |